

Shell ovate or oblong-ovate, somewhat irregular, much depressed, radiately ribbed and ridged; ribs few and prominent, particularly the one at the siphon, concentrically obsoletely striated; apex slightly uncinatè; siphon conspicuous. Colour blackish; ribs sometimes lighter, black within.

9. DESCRIPTIONS OF SIXTEEN NEW SPECIES OF BIRDS FROM THE ISLAND OF FORMOSA, COLLECTED BY ROBERT SWINHOE, ESQ., HER MAJESTY'S VICE-CONSUL AT FORMOSA. BY JOHN GOULD, ESQ., F.R.S., ETC.

PARUS CASTANEOVENTRIS, Gould.

A bar across the forehead and cheeks white; crown of the head, back of the neck, throat, and chest jet-black; on the nape a spot of pure white, bounded below by a slight mark of chestnut; mantle, back, shoulders, upper surface, wings, and thighs very deep blue-grey; abdomen and under tail-coverts rich chestnut; bill bluish black.

Total length, 4 inches; bill, $\frac{1}{2}$; wing, $2\frac{1}{2}$; tail, $1\frac{5}{8}$; tarsi, $\frac{5}{8}$.

Remark.—This species is very similar in colour to the *Parus varius* of Japan; but differs in having a much smaller amount of chestnut on the back, and in its smaller size.

ALCIPPE BRUNNEA, Gould.

Feathers of the crown and upper surface deep reddish brown, those of the crown slightly fringed with a darker tint, giving that part a scaled appearance; a longitudinal black stripe commences above the eye and passes down towards the nape, separating the brown colouring of the crown from the grey of the sides of the face and ear-coverts; throat and under surface brownish grey; flanks wood-brown; primaries and tail-feathers uniform chestnut-brown; thighs reddish brown; bill horn-colour; legs and toes flesh-white.

Total length, $4\frac{3}{4}$ inches; bill, $\frac{9}{16}$; wing, $2\frac{3}{8}$; tail, 2; tarsi, $\frac{3}{4}$.

Remark.—A small brown bird, rather less in size than *Accentor modularis*.

MYIOPHONEUS INSULARIS, Gould.

Lores jet black; forehead crossed by a narrow band of shining deep blue; crown of the head, throat, back of the neck, all the upper surface and the tail obscure blackish blue; shoulders very bright metallic blue; primaries and greater wing-coverts margined externally with bright blue; feathers of the chest and upper part of the abdomen black, with shining blue tips; lower part of the abdomen, thighs, under tail-coverts, and the under side of the tail-feathers dull black; bill and legs black.

Total length, $11\frac{1}{4}$ inches; bill, $1\frac{2}{3}$; wing, $6\frac{5}{8}$; tail, $5\frac{1}{2}$; tarsi, $2\frac{1}{5}$.

Remark.—This is a much larger bird than the *Myiophoneus cæru-*

leus of China; it also differs in the finer blue of the breast, and in the total absence of the spangled spots of shining blue which occur on the back of that species.

GARRULAX RUFICEPS, Gould.

Lores and chin black; forehead and crown, down to the nape, light orange-red; ear-coverts orange-brown; mantle, back, rump, sides of the chest, flanks, thighs, and two middle tail-feathers light brown; primaries blackish brown, margined externally with light olive-brown; lateral tail-feathers light brown at their bases, and largely tipped with white; throat, centre of the chest, and abdomen white; bill blackish brown; legs, toes, and claws light flesh-brown.

Total length, $10\frac{1}{2}$ inches; bill, $1\frac{1}{8}$; wing, 5; tail, $5\frac{1}{4}$; tarsi, $1\frac{3}{4}$.

Remark.—This species is allied to *Garrulax albogularis* and *G. caeruleatus*; but differs from both in the uniform orange-red colouring of the crown.

GARRULAX PÆCILORHYNCHA, Gould.

Crown of the head, nape, back, rump, throat, and chest deep rusty brown; many of the feathers of the crown slightly fringed at their tips with black, a hue which is also observable on the tips of the ear-coverts; primaries and secondaries reddish brown on their inner webs; the external edges of the former light grey, and of the latter deep rusty chestnut; tail deep rusty chestnut, particularly the six central feathers, the remainder being darker and having less of the chestnut hue, these lateral feathers also become lighter and of a reddish fawn-colour towards their tips; abdomen and thighs deep blue-grey, tinged on the latter with rufous; under tail-coverts fawn-colour; legs and toes yellowish olive.

Total length, $9\frac{3}{4}$ inches; bill, $1\frac{1}{4}$; wing, $4\frac{3}{8}$; tail, $4\frac{1}{2}$; tarsi, $1\frac{1}{2}$.

Remark.—This species differs so much in colour from all other known species of the form, that it cannot be confounded with any of them.

POMATORHINUS ERYTHROCNEMIS, Gould.

A narrow bar across the forehead, knees, and under tail-coverts rusty red; lores and ear-coverts grey; crown of the head and back of the neck brownish grey, passing into the deep rusty chestnut of the back, shoulders, and external margins of the wing-feathers; inner margins of the wing-feathers blackish brown; tail blackish brown, with rusty margins; a streak of black, commencing at the base of the under mandible, passes downward to the chest, which is conspicuously spotted or rather blotched with black; throat and centre of the abdomen white; flanks and upper part of the thighs rusty olive-brown; bill much curved, and of a purplish brown.

Total length, $8\frac{1}{4}$ inches; bill, $1\frac{3}{8}$; wing, $3\frac{3}{4}$; tail, $3\frac{3}{4}$; tarsi, $1\frac{1}{2}$.

Remark.—This species differs conspicuously from every other known species of the genus. It is about the size of the common Thrush (*Turdus musicus*).

HYPSSIPETES NIGERRIMA, Gould.

Entire plumage black, with the exception of the edges of the primaries and tail-feathers, which are pure grey, a tint which is also observable, but in a minor degree, on the margins of the greater and lesser wing-coverts, and on the feathers of the flanks and the back, on the latter, however, it is rather of a greenish cast than pure grey; bill blood-red; legs red.

Total length, $8\frac{1}{2}$ inches; bill, $1\frac{1}{8}$; wing, 5; tail, 4; tarsi, $\frac{3}{4}$.

Remark.—This species is somewhat allied to, but is a smaller bird than, the well-known *Hypsipetes psaroides* of India.

PERICROCOTUS GRISEOGULARIS, Gould.

Male: forehead, crown of the head, back of the neck, back, shoulders, and two central tail-feathers sooty black; wings black, with an oblique bar of scarlet across the primaries and secondaries, near their bases; throat and ear-coverts light grey; chest, abdomen, flanks, under tail-coverts, and rump rich scarlet; lateral tail-feathers black at their bases, and scarlet for the remainder of their length; thighs blackish brown; bill and legs black.

Total length, $6\frac{3}{4}$ inches; bill, $\frac{5}{8}$; wing, $3\frac{1}{2}$; tail, $3\frac{3}{4}$; tarsi, $\frac{3}{4}$.

Female: throat light grey, as in the male; crown, ear-coverts, back, and shoulders deep leaden grey; rump sulphur-yellow; chest, abdomen, under tail-coverts, the oblique band across the wing, and the tips of the outer tail-feathers rich Indian yellow; bill and legs black.

Remark.—This species is somewhat allied to *Pericrocotus saularis*, but differs from that bird in its clearly defined throat-mark and other characters.

GARRULUS TAÏVANUS, Gould.

Feathers covering the nostrils, a narrow bar on the forehead, and a longitudinal mark down the cheeks black; crown of the head, nape, back, and all the under surface vinous brown, tinged with grey on the centre of the back; rump and under tail-coverts white; primaries black, fringed on their outer margins with greyish white; the secondaries have the usual speculum of blue disposed in broad bars on their outer webs, and a patch of chestnut on the inner margin of the two shortest feathers, as in most of the true Jays; shoulders and spurious wing alternately barred with fine lines of blue and black; tail black; bill black; tarsi and toes flesh-colour.

Total length, $10\frac{1}{2}$ inches; bill, $1\frac{1}{8}$; wing, $6\frac{1}{8}$; tail, $5\frac{1}{2}$; tarsi, $1\frac{3}{8}$.

Remark.—This very distinct species, the smallest of the genus I have yet seen, has the same general colouring as the *Garrulus bispecularis* of the Himalayas and the *G. sinensis* of China, but differs from both in its smaller size and in the black colouring of the feathers covering the nostrils.

UROCISSA CÆRULEA, Gould.

Crown of the head, nape, cheeks, throat, and chest jet-black; body,

both above and below, and the thighs blue, of a cobalt tint in certain lights; all the primaries and secondaries fringed with white at their tips; upper tail-coverts light cobalt-blue, with a broad bar of black at their tips; two centre tail-feathers cobalt-blue, broadly tipped with white; the lateral feathers blue at their bases, to which succeeds a broad band of black, beyond which they are snow-white; bill and legs blood-red.

Total length, 21 inches; bill, $1\frac{5}{8}$; wing, $7\frac{1}{2}$; tail, $14\frac{1}{4}$; tarsi, $1\frac{5}{8}$.

Remark.—In size this fine new species is about equal to the *Urocissa sinensis*, but it differs from that and every other member of the genus in its stouter bill and in the blue colouring of the entire body.

MEGALÆMA NUHALIS, Gould.

Forehead dull olive; immediately before the eye a small patch of red; throat sulphur-yellow; remainder of the cheeks, the ear-coverts, back of the neck, and a band across the lower part of the throat pale greenish blue, to which succeeds a band of red, separating the sulphur-yellow of the throat from the yellowish green of the under surface; upper surface and tail green, with an obscure patch of red on the mantle; primaries blackish brown, externally margined with green; bill blackish horn-colour, except the base of the under mandible, which is sulphur-yellow; legs olive-black.

Total length, $7\frac{1}{2}$ in.; bill, $1\frac{1}{4}$; wing, $4\frac{1}{8}$; tail, $2\frac{3}{4}$; tarsi, 1.

Remark.—This very distinctly marked species is about the size of *Megalæma asiatica*.

PICUS INSULARIS, Gould.

Male: forehead crossed by a narrow band of buff; crown of the head scarlet; lores, cheeks, sides of the neck, and throat white; a black line, commencing at the base of the lower mandible, passes down between the ear-coverts and the throat, on to the sides of the chest, where it forms a broad patch; flanks buffy white, strongly striated with black; lower part of the abdomen and under tail-coverts rosy scarlet; mantle, shoulders, upper tail-coverts, and four middle tail-feathers black; centre of the back white, crossed with irregular rays of black, as in *Picus leuconotus*; wings black, spotted with white on both webs of the feathers, as in that species; outer tail-feathers alternately barred with black and white; bill bluish horn-colour; tarsi and feet lead-colour.

Total length, $9\frac{1}{4}$ inches; bill, $1\frac{1}{2}$; wing, $5\frac{3}{8}$; tail, $3\frac{1}{2}$; tarsi, $\frac{5}{8}$.

Female like the male in every respect, except in having a black instead of a red crown.

Remark.—This species is nearly allied to the *Picus leuconotus*, but is very distinct from that and every other member of the *Picidæ* I have yet seen; and it is certainly not included in the great work on this family of birds just completed by M. Malherbe.

GECINUS TANCOLO, Gould.

Lores, a narrow band across the forehead, back part of the head, nape, and a stripe down the cheeks black; centre of the forehead

blood-red ; back dull green, passing into greenish yellow on the rump ; shoulders and upper part of the wings dull wax-yellow ; primaries olive-brown, with small elongated marks of buff on their external margins ; internal webs of the greater coverts and primaries crossed with distinct bars of greyish white ; throat and cheeks grey ; under parts of the shoulders and axillaries alternately barred with greenish white and blackish brown ; chest and under surface sordid green.

Total length, $10\frac{1}{4}$ inches ; bill, $1\frac{5}{8}$; wing, $1\frac{5}{8}$; tail, $5\frac{1}{4}$; tarsi, $\frac{5}{8}$.

Remark.—The species to which this bird is most nearly allied is the *Gecinus occipitalis* of the Himalayas, from which however it is conspicuously different. I have adopted its Chinese name for a specific appellation.

EUPLOCAMUS SWINHOII, Gould.

Male : forehead black, gradually blending into the snowy-white lanceolate plumes which form a slight crest, and continue in a narrow line down the nape of the neck ; back snowy white, offering a strong contrast to the narrow black line with which it is bounded on each side, and the rich fiery chestnut of the scapularies ; lower part of the back, rump, and upper tail-coverts intense velvety black, broadly margined with shining steel or bluish black, these scale-like feathers gradually becoming of a larger size and of a more uniform black as they approach the tail-feathers ; wings blackish brown ; the greater and lesser coverts fringed with green ; two centre tail-feathers snow-white, the remainder black ; the somewhat elongated feathers of the chest and flanks black, with shining blue reflexions ; thighs and under tail-coverts dull black ; legs and spurs blood-red, except the tips of the latter, which are brown ; sides of the face mottled to an extent seldom seen even among Gallinaceous birds ; in front this appearance extends to the nostrils, while posteriorly it terminates in a point near the occiput ; a large lappet hangs down over each cheek, and a more pointed one rises, in the form of a horn, high above the crown, the whole being of the finest red, and covered with papillæ, as in the *Gennæus nychthemerus* ; bill light horn-colour.

Total length, 28 inches ; bill, $1\frac{1}{2}$; wing, 9 ; tail, 17 ; tarsi, 4.

Female : this sex offers a strong contrast to the male, from there being no appearance of a crest in any specimen I have seen, and in the entire plumage being reddish or orange-brown, particularly the under surface ; when examined in detail, however, many different but harmonizing tints are seen on the various parts of the body : on the back of the neck, mantle, scapularies, and lesser wing-coverts, the freckled brown feathers have lanceolate or spearhead-shaped markings surrounded with black down their centres, while the rump and upper tail-coverts are more uniformly and more finely freckled with orange and dark brown ; primaries alternately barred on both surfaces with chestnut and dark brown ; secondaries dark brown, conspicuously barred with ochre-yellow ; throat brownish grey ; chest orange-brown, each feather with two crescentic markings of dark brown ; centre of the abdomen and thighs orange-brown, slightly freckled with darker brown ; two centre tail-feathers dark brown, obscurely

barred with buff; lateral tail-feathers nearly uniform deep chestnut; bill horn-colour; space surrounding the eye and the legs red.

Total length, 18 inches; bill, $1\frac{1}{2}$; wing, $8\frac{1}{2}$; tail, 8; tarsi, 3.

Remark.—This exceedingly beautiful species is one of the most remarkable novelties I have had the good fortune to describe; in size it is somewhat smaller than the *Gennæus nycthemerus*, which it resembles in its red wattles and in the form of its tail, while in its strong legs, the scaly stiff feathers of the lower part of its back, the red-and-white colouring of the anterior portion of its upper surface, and in its steel-blue crest it more closely assimilates, in my opinion, to the members of the genus *Euplocamus*; and with that group, the Fire-backs, I have accordingly associated it.

In dedicating this fine bird to Mr. Swinhoe, I feel that I am only paying a just compliment to a gentleman who must ever rank among the foremost of those travellers who have enriched ornithology by their numerous Eastern discoveries.

GENUS BAMBUSICOLA, Gould.

Generic characters.—Bill moderately long, and very similar in form to that of *Perdix*; nostrils covered by an operculum; wings moderately long, round, and concave, the fifth primary the longest; tail somewhat more lengthened than in *Perdix*, rounded or inclined to a wedge-shape; tarsi rather long, and armed with a well-defined but blunt spur; toes longer than in *Perdix*, the two lateral ones equal in length, and united at their base by a membrane; hind toe rather long and free.

Sexes alike, as in *Caccabis*, but the female destitute of a spur.

This is a very distinct form among the *Gallinaceæ*, the species of which, so far as we yet know, are only two in number, namely, the present bird and the *Galloperdix sphenurus* of China. Both evince a predilection for forests of bamboo, which circumstance has suggested the generic appellation. In point of affinity they equally approach the members both of the genera *Perdix* and *Caccabis*.

BAMBUSICOLA SONORIVOX, Gould.

Male: crown of the head rusty brown, each feather obscurely barred and freckled with blackish brown; lores, ear-coverts, chest, back of the neck, and chest grey, each feather minutely freckled with blackish brown; back and rump olive, each feather minutely freckled with blackish brown; those of the back, nearest the mantle, largely blotched with deep chestnut; these chest-marks also extend over the shoulders, near the tips of which is a lanceolate spot of white; a similar but more obscure mark also occupies the sides of the wing-coverts, but, instead of being white, it is pale fawn-colour; greater wing-coverts chestnut in the centre, then black, fringed with deep buff; primaries blackish brown externally, margined with reddish chestnut; two middle tail-feathers freckled brown, buff, and black; the remainder deep chestnut-brown; abdomen rich cinnamon, with

a bar of rich chestnut near the tip of all the feathers of the flanks; thighs cinnamon-brown; bill and legs blackish brown.

Total length, $9\frac{1}{2}$ inches; bill, 1; wing, $5\frac{1}{8}$; tail, 4; tarsi, $1\frac{3}{4}$.

Female similarly coloured.

The young, at about a month old, have acquired much of the colouring of the adults, but the centre feathers of the back and shoulders are darker, with lighter edges, giving this part of the plumage a very sparkling appearance.

NUMENIUS RUFESCENS, Gould.

Head, neck, upper and under surface reddish fawn-colour, deepest and most conspicuous on the rump and tail-feathers; down the centre of each of the feathers is a streak of blackish brown, broadest and most conspicuous on the back, rump, and upper tail-coverts; primaries blackish brown, strongly toothed on their inner margins with greyish white; tail-feathers irregularly crossed with blackish brown; thighs light buff.

Total length, 23 inches; bill, 7; wing, $12\frac{1}{2}$; tail, $3\frac{3}{4}$; tarsi, 5.

This is a very fine species, about the size of *Numenius arcuatus* and *N. australis*, from the former of which it differs in the absence of the white rump, and from the latter in its rufous colouring.

10. ON A BIRD SUPPOSED TO BE THE FEMALE OF CROSSOPTILON AURITUM, PALLAS, FROM NORTHERN CHINA. BY ROBERT SWINHOE, F.Z.S., H.M. CONSUL AT FORMOSA.

My friend Dr. Lamprey, of the 97th Regiment, stationed at Tsin-tsin, sent me, while I was at Amoy, the bird I now exhibit, in skin, with the statement that he had seen several of the same species, all of which were similar in plumage. My specimen I have taken to the British Museum, and compared, with the kind assistance of Mr. G. R. Gray, with Hodgson's bird from the Himalayas. That they are closely allied species there can be no gainsaying; but of their distinctness there can be little doubt. Our bird is much larger, has longer tarsi, bill higher at the base, white throat, with longer ear-feathers, deep brown plumage, and a differently shaped tail. From the development of its cheek-skin, its form of bill, as well as the appearance of its plumage, it bears the mark of an old bird; and from the shape of its tail one would infer that it was a male. But, on examining its legs, we find no spur, only a hard callosity, such as distinguish the females of the *Phasianidæ*. I am rather inclined, therefore, to concur with Mr. G. R. Gray in considering the bird a female, but the masculine form of tail is rather a difficulty. In comparing it with the specimen of *Crossoptilon* in the Museum, it is, however, easy to see that the tail of the Peking bird is proportionately smaller, and, judging from analogy, it is rather improbable that the mature male would wear such a dingy livery. Now, supposing this bird to be a female, we have no hesitation in saying that it is not the female of the *Crossoptilon* from Thibet; we must, therefore, compare it